REMARKS/ARGUMENTS

Claims 1-32 are under examination in the present application. The Office Action mailed on October 15, 2007, includes the following rejection:

1. Claims 1-32 are rejected under 35 U.S.C. § 112.
2. Claims 1-32 are rejected under 35 U.S.C. § 102.
3. Claims 1-32 are rejected under 35 U.S.C. § 103.

Claims 1-32 are rejected under 35 U.S.C. § 112

The Action rejects claims 1-32 under 35 U.S.C. § 112 as not complying with the written description requirement. The Action states that there is no support for the term amorphous. Applicant submits that the specification fully complies with the written description requirement, as the skilled artisan would readily know that given the physical parameters and characteristics of the polymers are amorphous polymers. The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. See *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-564, 19 USPQ2d 1111, 1116-117 (Fed. Cir. 1991) and *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983). As such the skilled artisan would readily understand that the polymers were amorphous and thus complies with the written description requirement.

As such, the Applicants respectfully request withdrawal of the rejection of claims 1-32 under 35 U.S.C. § 112.

Claims 1-32 are rejected under 35 U.S.C. § 102(b) and in the alternative under 103(a)

The Action rejects claims 1-32 under 35 U.S.C. § 102(b) as being anticipated by United States Patent number 3,798,057 issued to Polovina, et al., ("Polovina") and in the alternative under 35 U.S.C. § 103(a) which is said to disclose the claimed invention.

Applicants respectfully submit that the Polovina fails to meet the standard of 35 U.S.C. § 102(b) and/or 103(a) as it does not teach each and every limitation of the present invention and is non-enabling art. Specifically, Polovina does not **identically disclose every element** of the claimed invention. See *Corning Glass Works v. Sumitomo Electric*, 9 USPQ 2d 1962, 1965 (Fed. Cir. 1989). A reference that excludes a claimed element, no matter how insubstantial or obvious, is enough to negate anticipation. *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193, 198 (Fed. Cir. 1983). As such, Polovina **cannot** anticipate the present invention.

The present invention teaches a water/air contact medium for use in an evaporative cooler, having a fibrous material impregnated with a compound having a continuous phase. The continuous phase includes one or more amorphous **non-chlorinated cationic** polymers with an overall cationic charge, for inhibiting deposition of one or more dissolved or particulate contaminants in the water onto the medium. The continuous phase includes a nonpolar solubility parameter δ_n within the range of about 6.5 to about 8.5 g, a polar solubility parameter δ_p within the range of zero to about 8.5 g, and a hydrogen bond solubility parameter δ_h, within the range of zero to about 7.0 g.

Polovina merely discloses a CHLORONATED hydrocarbon resin (see col. 1, ll. 48-59):

> used at pH's as low as 4 and as high as 13. The impregnated fibrous webs of the present invention are impregnated and coated with a mixture principally comprising a chlorinated hydrocarbon resin, a chlorinated additive thereto which functions as a plasticizer and/or film-forming agent, and a polyepoxy compound believed to function as a cross-linking agent imparting additional strength and rigidity to the resins and resin-coated fibrous webs. Also, the mixtures used for impregnation and coating may optionally contain pigments, particularly carbon black, and mineral fillers such as clays or powdered silica.

Polovina discloses the need for the polymer to be chlorinated, (see col. 2, ll. 38-44):

> In the alternative, chlorinated polypropylene resins may be employed. These materials are also available commercially, for example under the name "Parlon," and are available with the same degree of chlorination (about 65 percent) and in the same variety of grades depending on molecular weight, as are the chlorinated rubbers.

The chlorinated polymers of Polovina have chlorine atoms that are in a pendant substituent position on the polymer backbone and create a polymer with a chlorine functional group that provides unshared electron pairs lateral on the surface of the polymer backbone. This greatly affects the surface properties of the polymer, in such a way that is contrary to the non-chlorinated cationic polymers of present invention. Polovina also includes other chlorinated compounds, (see col. 2, ll. 45-53).

> It is desirable, according to the present invention, to combine a material functioning as a plasticizer and/or film-forming agent with these chlorinated C_3 and C_5 polymeric hydrocarbons. Particularly suitable plasticizers and/or film-forming agents include chlorinated terphenyls, such as those commercially available under the tradename "Aroclor," and chlorinated paraffins, i.e., chlorinated higher aliphatic hydrocarbons having 20 – 30 carbon atoms.

Polovina does disclose the use of polyepoxies (see col. 3, ll. 10-10).

> exact role of the polyepoxy compound in the claimed compositions is not known. However, because of its poly-functionality, it is believed it may act in the present compositions as a cross-linking agent. The polyepoxy compounds are glycidyl ethers of phenols, specifically diglycidyl or polyglycidyl ethers of bisphenols such as bisphenol A and bisphenol F. Diglycidyl ethers

However, the polyepoxies function as cross-linking agents imparting additional strength and rigidity to the **chlorinated** hydrocarbon resins and **chlorinated** hydrocarbon resins-coated fibrous webs. Therefore, at the very most, Polovina discloses a chlorinated hydrocarbon resin and a poly-epoxy cross-linking agent. The present invention is non-chlorinated and has an overall cationic charge and a DIFFERENT chemical structure and function than the chlorinated hydrocarbon resins of Polovina. As the chemical structures are different the composition must also be different. Polovina is NOT identical to the present invention and CANNOT anticipate (or render obvious) the present invention.

In addition, Polovina only discloses chlorinated polymers. "Suitable chlorinated rubbers are commercially available under the tradename "Parlon"..." (Polovina, col. 2, ll. 19-20). As the skilled artisan knows chlorinated polymers (e.g., Parlon) are **semi-crystalline** polymers in structure and are therefore different in structure than the present invention and cannot identically

disclose the claimed invention. Polovina in no way enable one skilled in the art to make the one or more amorphous non-chlorinated cationic polymers with an overall cationic charge of the present invention.

To anticipate a claim, "a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." *PPG Industries, Inc. v. Guardian Industries Corp.*, 75 F.3d 1558, 1566, 37 U.S.P.Q.2d 1618, 1624 (Fed. Cir. 1996). As stated by the Courts in *Akzo N.V. v. ITC*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986) and *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773, 778 (Fed. Cir. 1985), the anticipating prior art reference "must enable one skilled in the art to practice the claimed invention, thus placing the allegedly disclosed matter in the possession of the public."

Specifically, Polovina teaches chlorinated semi-crystalline polymers (e.g., chlorinated polypropylene and polyisoprene, that are chlorinated polymer of C_3 monomers or polymer of a C_5 monomer) and does not teach **non-chlorinated cationic amorphous polymers** that have an overall cationic charge. In addition, the polymers of Polovina do not have a nonpolar solubility parameter δ_n within the range of about 6.5 to about 8.5 g, a polar solubility parameter δ_p within the range of zero to about 8.5 g, and a hydrogen bond solubility parameter δ_h, within the range of zero to about 7.0 g. Therefore, Polovina simply does not teach the present invention. To anticipate a claim, a reference must teach every element of the claim either impliedly or explicitly. See MPEP §2131. As elaborated in *Richardson v. Suzuki Motor Co.*, "[t]he **identical invention must be shown** in as complete detail as is contained in the claim." 9 U.S.P.Q.2d 1913, 1920(Fed. Cir. 1987) emphasis added. One skilled in the art would not be unable to practice the present invention without the teachings of the present application and as such Polovina cannot anticipate or render obvious the present invention.

Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102 and in the alternative the rejection under 35 U.S.C. § 103.

Claims 1-32 are rejected in the alternative under 103(a)

The Action rejects claims 1-32 in the under 35 U.S.C. § 103(a). Applicants submit that claims 1-32 are not rendered obvious by the combination of Polovina and the "Article." The combination fails to teach every element of the claims and provides no expectation of success or

motivation to combine the references.

As stated above and incorporated herein, Polovina does not teach every element of the claims of the present invention and the combination with the Article does not supply the missing elements. Furthermore, there is no expectation of success as the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose since the polymers of Polovina are chlorinated.

> MPEP Section 2143.01(V) states that "[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." Likewise, MPEP Section 2143.01 (VI) states "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious."

Polovina does not teach each and every limitation of the present invention, there is no reasonable expectation of success, and there is no teaching or suggestion in the prior art reference to modify the reference as stated. Simply stated, one skilled in the art could not practice the present invention without the teachings of the present disclosure.

As such, the Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 103.

Conclusion

In light of the remarks and arguments presented above, Applicants respectfully submit that the claims 1-32 are in the Application are in condition for allowance.

If the Examiner has any questions or comments, or if further clarification is required, it is requested that the Examiner contact the undersigned at the telephone number listed below.

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Respectfully submitted,

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